Claims:

- 1. (Currently Amended) In an anti-reflective coating composition for use during microlithographic processes, said composition comprising a polymer dissolved in a solvent system, the improvement being that said composition comprises less than about 0.3% by weight of a strong acid and gives a spin bowl compatibility test result of greater than about 90% when propylene glycol methyl ether is used in the spin bowl compatibility test.
- 2. (Original) The composition of claim 1, said composition further comprising a compound selected from the group consisting of phenolic compounds, carboxylic acids, phosphoric acid, and cyano compounds.
- 3. (Original) The composition of claim 2, wherein said compound is chemically bonded with said polymer.
- 4. (Original) The composition of claim 2, wherein said compound is selected from the group consisting of Bisphenol S, Bisphenol A, α -cyano-4-hydroxycinnamic acid, phenol novolaks, and acetic acid.
- 5. (Original) The composition of claim 1, wherein said composition comprises a compound selected from the group consisting of surfactants, crosslinking agents, and mixtures thereof.

- 6. (Original) The composition of claim 5, wherein said surfactant is selected from the group consisting of fluorinated surfactants and carbonated surfactants.
- 7. (Original) The composition of claim 5, wherein said crosslinking agent is selected from the group consisting of aminoplasts and epoxies.
- 8. (Original) The composition of claim 1, wherein said solvent system includes a solvent selected from the group consisting of PGMEA, PGME, propylene glycol *n*-propyl ether, 2-heptanone, *N*-methylpyrollidinone, ethyl lactate, cyclohexanone, ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, and mixtures thereof.
- 9. (Original) The composition of claim 1, wherein said polymer is selected from the group consisting of acrylic polymers, polyesters, epoxy novolaks, polysaccharides, polyethers, polyimides, and mixtures thereof.
 - 10. (Original) The composition of claim 9, wherein said polymer is a methacrylate.
- 11. (Original) In an anti-reflective coating composition for use during microlithographic processes, said composition comprising a polymer dissolved in a solvent system and having a weight ratio of strong acid to weak acid, the improvement being that the weight ratio is from about 0:100 to about 50:50.

- 12. (Original) The composition of claim 11, said composition further comprising a compound selected from the group consisting of phenolic compounds, carboxylic acids, phosphoric acid, and cyano compounds.
- 13. (Original) The composition of claim 12, wherein said compound is chemically bonded with said polymer.
- 14. (Original) The composition of claim 12, wherein said compound is selected from the group consisting of Bisphenol S, Bisphenol A, α -cyano-4-hydroxycinnamic acid, phenol novolaks, and acetic acid.
- 15. (Original) The composition of claim 11, wherein said composition comprises a compound selected from the group consisting of surfactants, crosslinking agents, and mixtures thereof.
- 16. (Original) The composition of claim 15, wherein said surfactant is selected from the group consisting of fluorinated surfactants and carbonated surfactants.
- 17. (Original) The composition of claim 15, wherein said crosslinking agent is selected from the group consisting of aminoplasts and epoxies.

- 18. (Original) The composition of claim 11, wherein said solvent system includes a solvent selected from the group consisting of PGMEA, PGME, propylene glycol *n*-propyl ether, 2-heptanone, *N*-methylpyrollidinone, ethyl lactate, cyclohexanone, ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, and mixtures thereof.
- 19. (Original) The composition of claim 11, wherein said polymer is selected from the group consisting of acrylic polymers, polyesters, epoxy novolaks, polysaccharides, polyethers, polyimides, and mixtures thereof.
 - 20. (Original) The composition of claim 19, wherein said polymer is a methacrylate.
- 21. (Original) The composition of claim 11, wherein said composition gives a spin bowl compatibility test result of greater than about 90%.
- 22. (Original) The composition of claim 11, wherein said composition comprises less than about 0.3% by weight of a strong acid.

- 23. (Original) In an anti-reflective coating composition for use during microlithographic processes, said composition comprising a polymer dissolved in a solvent system, the improvement being that said composition comprises a compound selected from the group consisting of Bisphenol A and α -cyano-4-hydroxycinnamic acid.
- 24. (Original) The composition of claim 23, wherein said composition gives a spin bowl compatibility test result of greater than about 90%.
- 25. (Original) The composition of claim 23, wherein said composition comprises less than about 0.3% by weight of a strong acid.
- 26. (Original) The composition of claim 23, said composition having a weight ratio of strong acid to weak acid of from about 0:100 to about 50:50.
- 27. (Original) The composition of claim 23, wherein said compound is chemically bonded with said polymer.

- 28. (Currently Amended) The combination of a substrate having a surface and a cured protective layer on said substrate surface, said cured protective layer being formed from a composition comprising a polymer dissolved in a solvent system and less than about 0.3% by weight of a strong acid, said composition giving a spin bowl compatibility test result of greater than about 90% when propylene glycol methyl ether is used in the spin bowl compatibility test.
- 29. (Original) The combination of claim 28, said composition further comprising a compound selected from the group consisting of phenolic compounds, carboxylic acids, phosphoric acid, and cyano compounds.
- 30. (Original) The combination of claim 29, wherein said compound is chemically bonded with said polymer.
- 31. (Original) The combination of claim 29, wherein said compound is selected from the group consisting of Bisphenol S, Bisphenol A, α -cyano-4-hydroxycinnamic acid, phenol novolaks, and acetic acid.
- 32. (Original) The combination of claim 28, wherein said composition comprises a compound selected from the group consisting of surfactants, crosslinking agents, and mixtures thereof.

- 33. (Original) The combination of claim 28, wherein said polymer is selected from the group consisting of acrylic polymers, polyesters, epoxy novolaks, polysaccharides, polyethers, polyimides, and mixtures thereof.
 - 34. (Original) The combination of claim 33, wherein said polymer is a methacrylate.
- 35. (Original) The combination of a substrate having a surface and a cured protective layer on said substrate surface, said cured protective layer being formed from a composition comprising a polymer dissolved in a solvent system, the weight ratio of strong acid to weak acid in said composition being from about 0:100 to about 50:50.
- 36. (Original) The combination of claim 35, said composition further comprising a compound selected from the group consisting of phenolic compounds, carboxylic acids, phosphoric acid, and cyano compounds.
- 37. (Original) The combination of claim 36, wherein said compound is chemically bonded with said polymer.
- 38. (Original) The combination of claim 36, wherein said compound is selected from the group consisting of Bisphenol S, Bisphenol A, α -cyano-4-hydroxycinnamic acid, phenol novolaks, and acetic acid.

- 39. (Original) The combination of claim 35, wherein said composition comprises a compound selected from the group consisting of surfactants, crosslinking agents, and mixtures thereof.
- 40. (Original) The combination of claim 35, wherein said polymer is selected from the group consisting of acrylic polymers, polyesters, epoxy novolaks, polysaccharides, polyethers, polyimides, and mixtures thereof.
 - 41. (Original) The combination of claim 40, wherein said polymer is a methacrylate.
- 42. (Original) The combination of claim 35, wherein said composition gives a spin bowl compatibility test result of greater than about 90%.
- 43. (Original) The combination of claim 35, wherein said composition comprises less than about 0.3% by weight of a strong acid.
- 44. (Original) The combination of a substrate having a surface and a cured protective layer on said substrate surface, said cured protective layer being formed from a composition comprising a polymer dissolved in a solvent system and a compound selected from the group consisting of Bisphenol A and α-cyano-4-hydroxycinnamic acid.

- 45. (Original) The combination of claim 44, wherein said composition gives a spin bowl compatibility test result of greater than about 90%.
- 46. (Original) The combination of claim 44, wherein said composition comprises less than about 0.3% by weight of a strong acid.
- 47. (Original) The combination of claim 44, said composition having a weight ratio of strong acid to weak acid of from about 0:100 to about 50:50.
- 48. (Original) The combination of claim 44, wherein said compound is chemically bonded with said polymer.
- 49. (Original) A method of forming a precursor structure for use in manufacturing integrated circuits, said method comprising the step of applying a quantity of an anti-reflective composition according to claim 1 to the surface of a substrate to form an anti-reflective layer on said substrate surface.
- 50. (Original) The method of claim 49, wherein said applying step comprises spincoating said composition on said substrate surface.

- 51. (Original) The method of claim 49, further including the step of baking said antireflective layer after said applying step at a temperature of from about 125-225°C.
- 52. (Original) The method of claim 51, further including the step of applying a photoresist to said baked anti-reflective layer.
 - 53. (Original) The method of claim 52, furthering including the steps of:
 exposing at least a portion of said photoresist layer to activating radiation;
 developing said exposed photoresist layer; and
 etching said developed photoresist layer.
- 54. (Original) A method of forming a precursor structure for use in manufacturing integrated circuits, said method comprising the step of applying a quantity of an anti-reflective composition according to claim 11 to the surface of a substrate to form an anti-reflective layer on said substrate surface.
- 55. (Original) The method of claim 54, further including the step of baking said antireflective layer after said applying step at a temperature of from about 125-225°C.
- 56. (Original) The method of claim 55, further including the step of applying a photoresist to said baked anti-reflective layer.

- 57. (Original) The method of claim 56, furthering including the steps of:
 exposing at least a portion of said photoresist layer to activating radiation;
 developing said exposed photoresist layer; and
 etching said developed photoresist layer.
- 58. (Original) A method of forming a precursor structure for use in manufacturing integrated circuits, said method comprising the step of applying a quantity of an anti-reflective composition according to claim 23 to the surface of a substrate to form an anti-reflective layer on said substrate surface.
- 59. (Original) The method of claim 58, further including the step of baking said antireflective layer after said applying step at a temperature of from about 125-225°C.
- 60. (Original) The method of claim 59, further including the step of applying a photoresist to said baked anti-reflective layer.
 - 61. (Original) The method of claim 60, furthering including the steps of:
 exposing at least a portion of said photoresist layer to activating radiation;
 developing said exposed photoresist layer; and
 etching said developed photoresist layer.

- 62. (Original) In an anti-reflective coating composition for use during microlithographic processes, said composition comprising a polymer dissolved in a solvent system, the improvement being that said composition comprises less than about 0.3% by weight of a strong acid and from about 0.02-5% by weight of a weak acid.
- 63. (Original) The composition of claim 62, wherein said composition gives a spin bowl compatibility test result of greater than about 90%.
- 64. (Original) The combination of a substrate having a surface and a cured protective layer on said substrate surface, said cured protective layer being formed from a composition comprising:

a polymer dissolved in a solvent system; less than about 0.3% by weight of a strong acid; and

from about 0.02-5% by weight of a weak acid.

65. (Original) The composition of claim 64, wherein said composition gives a spin bowl compatibility test result of greater than about 90%.

- 66. (Original) A method of forming a precursor structure for use in manufacturing integrated circuits, said method comprising the step of applying a quantity of an anti-reflective composition according to claim 62 to the surface of a substrate to form an anti-reflective layer on said substrate surface.
- 67. (Original) The method of claim 66, further including the step of baking said antireflective layer after said applying step at a temperature of from about 125-225°C.
- 68. (Original) The method of claim 67, further including the step of applying a photoresist to said baked anti-reflective layer.
 - 69. (Original) The method of claim 68, furthering including the steps of:
 exposing at least a portion of said photoresist layer to activating radiation;
 developing said exposed photoresist layer; and
 etching said developed photoresist layer.